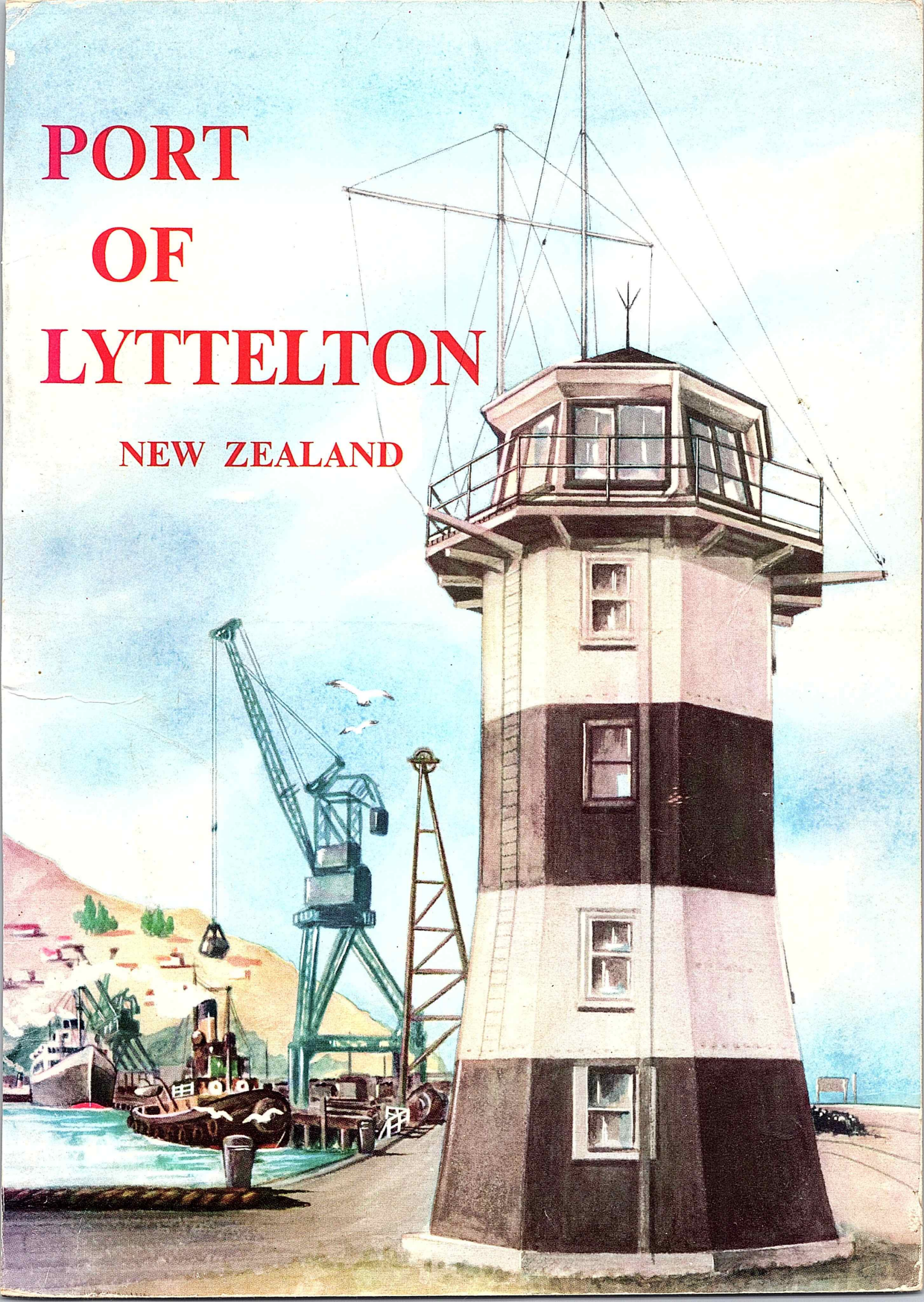
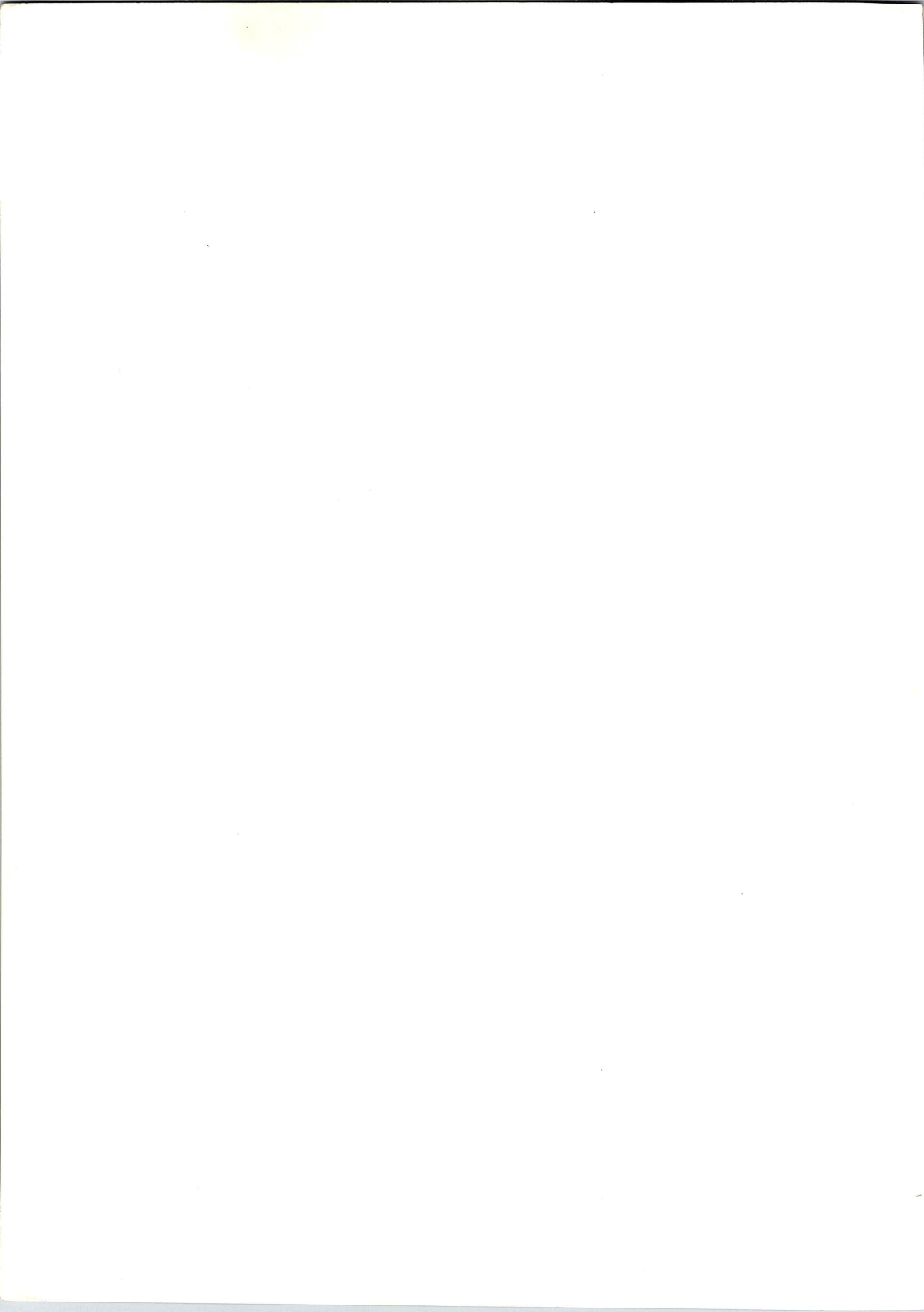


# PORT OF LYTTELTON

NEW ZEALAND

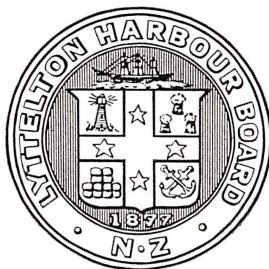






\$15

# THE LYTTELTON HARBOUR BOARD



## LYTTTELTON HARBOUR BOARD

*Chairman:*

W. P. GLUE, O.B.E.

*Deputy Chairman:*

E. C. BATHURST, O.B.E., J.P.

*Members:*

F. W. FREEMAN, O.B.E., J.P.	C. W. TYLER, O.B.E., J.P.
W. S. MacGIBBON, O.B.E., J.P.	G. MANNING, M.A., J.P.
R. T. McMILLAN	W. F. McARTHUR, J.P.
A. A. MacFARLANE, D.F.C., J.P.	L. G. AMOS, J.P.
W. B. LAING, J.P.	J. BRAND

F. I. SUTTON

*Secretary-Manager:* A. L. BURK, F.I.A.O., J.P.

*Engineer-in-Chief:* J. A. CASHIN, M.I.C.E., M.I.MECH.E.

*Harbourmaster:* CAPTAIN A. R. CHAMPION

*Bankers:* BANK OF NEW ZEALAND

*Solicitors:* HARPER, PASCOE, BUCHANAN and PENLINGTON



LYTTELTON, 1850

The original jetty in foreground, Emigration Barracks and Agent's house on left. The First Four Ships at anchor.



# Port of Lyttelton

## History

THE PORT OF LYTTELTON played a vital part in the colonisation of the Canterbury Plains, just as it has made important contributions to the orderly development of the Province's agricultural and pastoral industries, and to the manufacturing industries of metropolitan Christchurch in the 108 years since the first organised settlement.

The port now bears the name of Lord Lyttelton, who was the first chairman of the Canterbury Association, the body which organised the settlement. As the landing place of the pioneers from the famous First Four Ships, Lyttelton is assured of a lasting place in New Zealand's history.

To the Maori the harbour was known as Whanga-raupo or Whaka-raupo, but with the beginnings of European contact it received the name of Port Cooper when flax traders from Australia began to call here about 1825. Port Cooper it remained during the hey-day of the whalers (1835-45) who preceded the settlers on the land.

Before the arrival of the settlers, various pioneers began to take up land on Banks Peninsula and the Plains from as early as 1840; but it was not until 1849, after the Canterbury Association was formed, that Lyttelton began to take shape. Captain Joseph Thomas who had made a preliminary exploration six months earlier, came to the port in July of that year with a party of surveyors and road-builders, and by September the survey of Lyttelton was completed. Within a few months a jetty was built, roads begun, immigration barracks constructed, a rough breastwork created, and even two hotels opened in primitive shanties. So when the first settlers of the Association landed at the end of 1850 they found a settlement awaiting them.

With the arrival of the Canterbury Pilgrims, the trade of the port increased rapidly. Administered by the Canterbury Provincial Government until 1876, the port had taken its first big forward step in 1861, when work was begun on driving a railway tunnel through the hills to connect the fertile plains and the embryonic city with their harbour gateway. Spoil from the work was used for extensive reclamation almost all round the present protected inner harbour.

## **First Harbour Board**

With the abolition of provincial system of government in 1876, Port Lyttelton was formally named and the Lyttelton Harbour Board brought into existence on 10th January, 1877, by Act of Parliament passed on 31st October, 1876.

Ten members comprised the first board—the Mayor of Lyttelton, two appointees of the Government, one elected by the Lyttelton Borough ratepayers, two elected by the Christchurch Chamber of Commerce, two by the Selwyn County Council and two by Christchurch City ratepayers.

The constitution of the board has varied over the years, reaching as high as nineteen, but today it consists of thirteen members, all elected. Five members are returned by electors in Christchurch city, and the others from six groupings of boroughs and counties in the board's district.

The board's representation area extends from the Rangitata River in the south to the Conway River in the north, with an area of 10,186 square miles, embracing 21 counties, six boroughs, one town district and the city of Christchurch, the South Island's leading city.

When the railway tunnel was commenced in 1861, Christchurch's population was 12,500. In 1877 the population of the board's area was 73,966. Today, metropolitan Christchurch has a population of 200,000, and 260,000 people live in the board's area.

The wharves in the board's first year could berth 42 sailing vessels with an aggregate registered tonnage of 33,100, and the five jetties and three breast-works provided 5,445 feet of berthage space. Three overseas ships would now more than equal this tonnage, and the effective berthage totals 10,338 feet.

In 1888, 1700 vessels totalling 602,687 tons net register used the port, while in 1956, 1,134 vessels of 2,725,859 net tonnage were accommodated.

The earliest tonnage statistics of cargo have not been preserved, but in the 36 years up to 1957, cargo passing over the wharves has increased from 658,421 tons to 1,437,121 tons per annum.

Notable developments in the port's history have included the introduction 75 years ago of refrigeration for meat shipments, which allowed Canterbury lamb to be shipped from Lyttelton to arrive fresh on the Home market, there to establish Canterbury's name; and more recently, the greater use of fuel oil, for Lyttelton receives the bulk of the South Island's oil requirements.



## **Finances**

The Harbour Board took over from the Provincial Government assets of £285,666, with £42,754 in cash at the bank; and liabilities of £1,996.

At 30th September, 1957, cash and investments in special funds stood at £1,935,533, capital assets at £1,277,920 and floating assets £401,799, while the public debt stood at £1,133,719 and current liabilities at £17,696.

Loans are secured on the ordinary revenues of the Board, and, in addition, a special levy on all cargo landed at or shipped from Lyttelton is collected as further security for the interest and repayment of loans.

## **Antarctic Associations**

Lyttelton's historical record shows a close association with Antarctic exploration, for the port has been the stepping-off place for several Antarctic expeditions.

In 1901 the *Discovery*, with Captain Robert Falcon Scott's expedition on board, used the port for docking and refitting. In 1908, Sir Ernest Shackleton left for the South from Lyttelton. Captain Scott returned in 1910, and Lyttelton was the base for the *Terra Nova*, and for the training of husky dogs (on Quail Island) before Scott set off on his fateful Polar expedition.

In December, 1955, and again in 1956 and 1957, modern ice-breakers, transports and tankers of the United States Navy's Task Force 43 sailed from Lyttelton to establish International Geophysical Year bases at the South Pole and in the Antarctic; and early in 1957 New Zealand's own Antarctic expedition, led by the famous mountaineer, Sir Edmund Hillary, sailed in the *Endeavour* from Lyttelton for the Ross Sea.





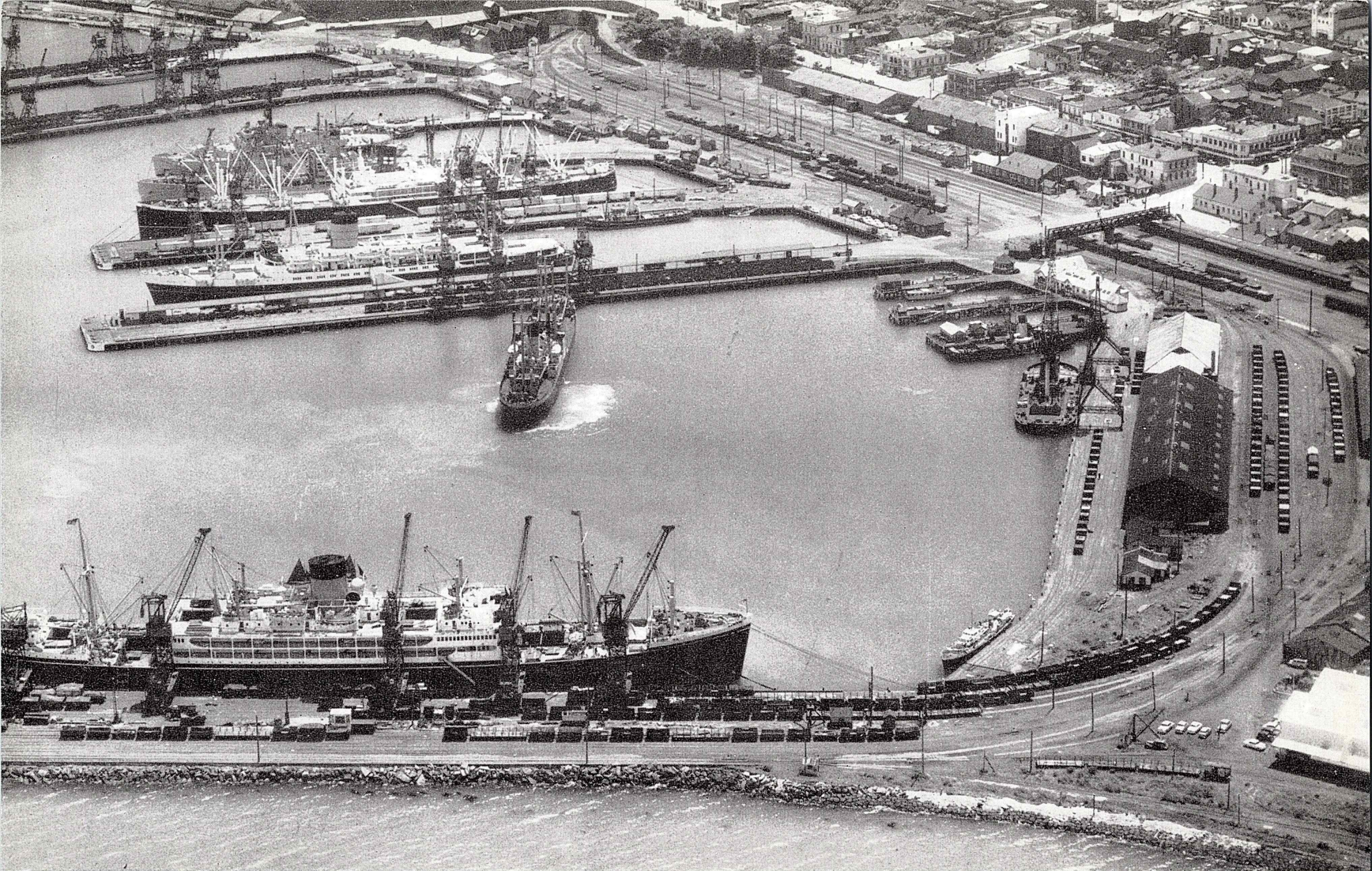
LYTTELTON, WITH CHRISTCHURCH (C)





TY VISIBLE OVER THE PORT HILLS





RAILWAY SIDINGS AND SHUNTING YARDS SERVICING THE LYTTELTON JETTIES CONVERGE ON THE  
MOORHOUSE RAILWAY TUNNEL TO CHRISTCHURCH (*top centre*)



## Noteworthy Points in the History of the Port of Lyttelton

### Year

- 1770 February 16—Captain James Cook in *Endeavour* passed headland which he named Banks Island on assumption that the present harbour inlet detached it from the main coast.
- 1809 Captain S. Chase in vessel *Pegasus* tried to sail between coast and supposed island—discovered it was a peninsula.
- 1829 Captain Wiseman, agent for Sydney traders, Messrs. Cooper and Levy named two large bays on northern coast of peninsula after his employers. Lyttelton then known as Port Cooper.
- 1836 Harbour first used as base by Whalers.
- 1840 August 17th—French settlers arrived in Akaroa on Banks Peninsula.
- 1848 December—Captain Joseph Thomas, the representative of the Canterbury Association arrived to explore site for Canterbury settlement.
- 1849 July—Capt. Thomas returned with survey and road-making parties. First jetty built. Town laid out, named after Lord Lyttelton.
- 1850 April 12th—John Robert Godley, agent of the Canterbury Association, arrived in the *Lady Nugent*.
- 1850 December 16th—The Canterbury Association's first four ships, *Charlotte Jane*, *Randolph*, *Sir George Seymour*, and *Cressy* arrived. Colonisation of Canterbury plains began.
- 1857 Peacock's wharf built by trader of that name.
- 1861 July—Work commenced on driving the Moorhouse railway tunnel through the Port Hills.
- 1863 Harbour Commission appointed to make plans for better shelter of vessels in Erskine Bay where the Inner Harbour now is.
- 1864 Eastern mole of Inner Harbour commenced. (Finished in 1877.)
- 1867 November 9th—Moorhouse Tunnel opened and railway link from Lyttelton established.
- 1866- } Breastworks and additional jetties constructed.  
1876 }
- 1873 Western breakwater commenced. (Finished 1877.)

- 1876    October 31st—Lyttelton Harbour Board Act passed by Parliament and came into force on December 1st, 1876.
- 1877    January 10th—First Lyttelton Harbour Board elected.
- 1878    Sunday working of wharves disallowed. First tug, *Lyttelton*, and a small dredge purchased. Gas lighting of wharves commenced.
- 1879    Construction of graving dock commenced.
- 1882    Conversion from gas to electric lighting of wharves commenced.
- 1883    Patent slip constructed (converted to electric drive in 1925).  
           January 3rd—Graving dock opened—N.Z. Shipping Co. Ltd's *Hurunui* first vessel to enter.  
           April—First shipment of frozen meat to Great Britain in s.s. *British King*.
- 1891    Board's cool stores constructed and opened.
- 1900    March 22nd—Dredge *Manchester* arrived after epic fourteen months' voyage from Liverpool—commenced work in May. (Sold to Sydney Harbour Trust in 1912, sailed April 3rd, but after departure from Wellington en route was not heard of again.)
- 1901    Visit of H.R.H. Duke and Duchess of Cornwall and York (later King George V and Queen Mary).
- 1907    New tug, *Canterbury*, arrived. Later renamed *Lyttelton*, and still in service.
- 1909    Naval Point reclamation of approximately 70 acres commenced (completed 1925).
- 1910    Grab dredge *Te Whaka* purchased. Still in service.
- 1912    Suction hopper dredge *Canterbury* arrived and still in service.
- 1920    May 12th—Visit of H.R.H. the Prince of Wales in H.M.S. *Renown*.
- 1922    Commencement of provision of electric cranes and capstans on wharves. (At present 28 cranes operating.)
- 1925    August 17th—Sixteen vessels of American Fleet in port.
- 1926    80-ton floating crane *Rapaki* brought into service and still operating.
- 1927    October 18th—First oil tanker to visit Lyttelton, S.S. *Lincoln Ellsworth* discharged 980,000 gallons.
- 1928    Port and City League approached Board with their plans for a road tunnel and highway between Christchurch and Lyttelton at an estimated cost of £470,000. Proposals rejected by a Commission in 1930.

- 1929 February 14th—Railways Department converted Christchurch-Lyttelton line from steam to electric traction.
- 1935 Visit of H.R.H. the Duke of Gloucester in H.M.A.S. *Australia*.
- 1939 June 8th—New tug *Lyttelton II* arrived and still in service.
- 1942 T.S.S. *Ceramic*, length 655 ft., 70 ft. beam, drawing 33½ ft. fore and aft, became the deepest draught vessel to use the Port.
- 1949 Adderley Heads Signal Station, which was established in 1864, abolished, and a radio-telephone equipped Signal Station established on Gladstone Pier.
- 1950 Centennial of the Province of Canterbury celebrated.
- 1951 Royal Commission of enquiry into Waterfront Industry working appointed by Government. (Sittings completed and report presented in 1952.)
- 1952 April 29th—Record tonnage of vessels in Port—12 overseas and 6 coastal vessels totalling 130,141 net register tons.
- 1954 January—Visit of H.R.H. Elizabeth II and Philip, Duke of Edinburgh in Royal Yacht, *Gothic*.  
April—Waterfront Amenities Building officially opened and named “Centennial Hall”.  
R.M.S. *Caronia* berthed at Gladstone Pier. Largest vessel to use the Port. Length 715 ft., beam 92 ft. and draught 30 ft.
- 1955 Lyttelton Harbour Board Loan and Empowering Bill passed authorising an estimated £3,500,000 harbour extension scheme.
- 1956 Statutory authority obtained to raise £600,000 for the purchase of a new dredge.  
Christchurch-Lyttelton Road Tunnel Act passed authorising construction of a road tunnel through the Port Hills between Christchurch and Lyttelton.  
Visit of H.R.H. the Duke of Edinburgh in Royal Yacht *Britannia*.
- 1957 Commencement of erection of Board’s new Administration Building in Christchurch.





CENTRAL CHRISTCHURCH. THE ENTRANCE TO LYTTELTON HARBOUR  
IS BEHIND GODLEY HEAD IN THE CENTRE BACKGROUND



# Serving City and Province

LYTTELTON, third port in New Zealand and first in the South Island, is the gateway for the South Island as an import port. For exports, it serves the great primary-producing plains of Canterbury province, the name of which has been fixed firmly on the Home market by the quality of its lamb.

Lyttelton is the port of access to the City of Christchurch, frequently called the "garden city" because of its spacious parks and municipal and home gardens. It is the city which is destined to assume increasing importance in the industrial development of New Zealand, and it is to that development that the Lyttelton Harbour Board has looked in providing its plans for the future, for the new industries will need a steady flow of imported raw materials.

In a straight line, the port is not far from the city, and that straight line is soon to be provided, for Government authority has been given for a road tunnel to connect the port with the city and the plains.

At present the port is connected by railway through a mile and three-quarter tunnel and seven miles of electrified railway line; and by two roads over the Port Hills, the shorter being 13 miles.

## **Farm Production**

Primary production is still increasing in Canterbury, a major factor in recent years being the amount of aerial top-dressing, on the hill country. Canterbury grows approximately two-fifths of all New Zealand's arable crops and its grass and clover seeds have become well known in many parts of the world.

The sheep population in 1956 was 6,828,050, of which 4,772,753 were breeding ewes.

There are seven freezing works in the province. Four are within a few miles of the centre of the city, and the others are in the south. An average yearly killing of lambs for export to the United Kingdom market is three and a quarter million.

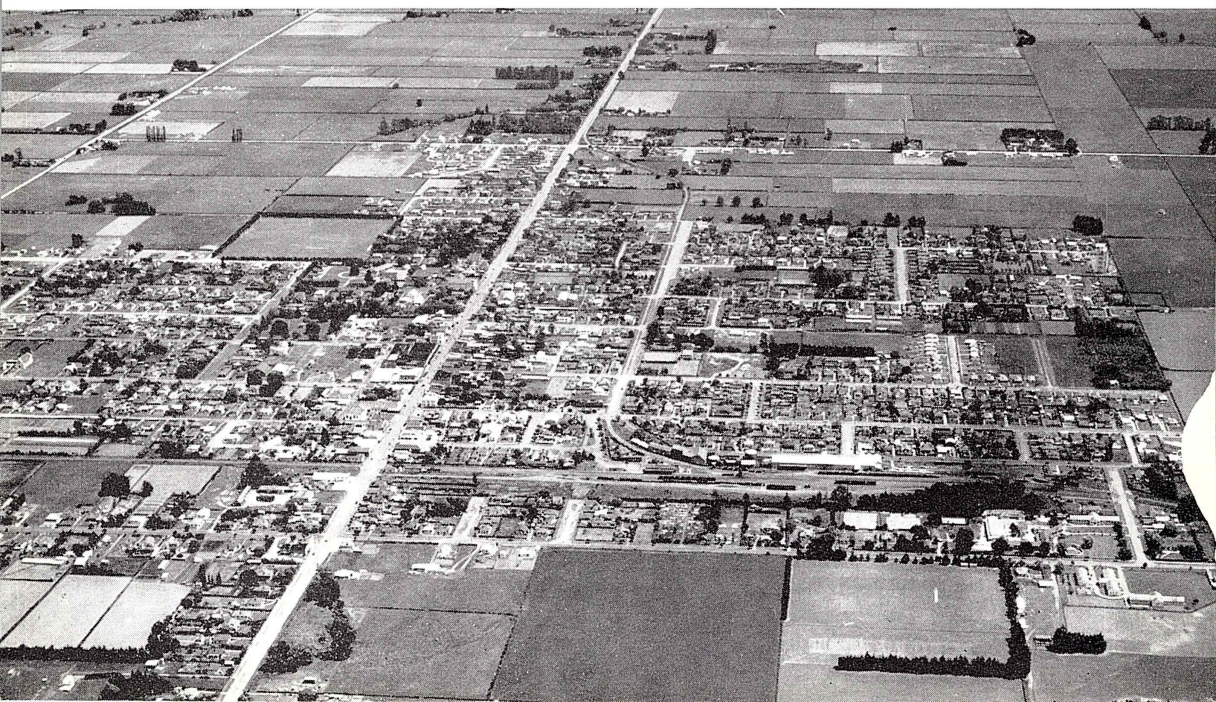
Insulated railway vans take the carcasses from the works to the ship's side at Lyttelton for shipment to the Home markets, and recently there have been experimental loadings-out from the city freezing works by road transport.





*Above:* ASHBURTON, CENTRE FOR MID-CANTERBURY, WITH  
SOUTHERN ALPS BEYOND

*Below:* RANGIORA, CENTRE FOR NORTH CANTERBURY





While not a major cattle-producing province, Canterbury has a cattle population of 262,790, and its freezing works are the destination of some of the big cattle from the back country of the West Coast and Marlborough, separate provinces.

From the fertile plains and top-dressed hill country, the sheep produce a wool clip of a high standard and with a fleece poundage in excess of that in most parts of the world. At the Canterbury 1955-56 sales, 68,549,000 lb. of wool was sold at auction—an average of 9.75 lb. per head—and most was sold in the grease and exported.

Dairying in volume of production appears minor when compared with the production of North Island areas, but in certain Canterbury areas the land is almost entirely given over to it, and up-to-date butter and cheese factories throughout the province process the milk and cream for export, mainly through Lyttelton.

Encouragement to primary production is provided by the Lyttelton Harbour Board in the form of trophies for the best fat lamb, cheese and butter to pass through the port; and every year there is keen competition between farmers and dairy companies for the honours.

### **Factories and Consumers**

It would be no exaggeration to say that there is not a household in the whole of the South Island without some article that has passed over the Lyttelton wharves. In spite of its importance as a place from which New Zealand's food products leave for the markets of the world, it is as an import port that Lyttelton has major significance, and the importance of that side of its work will increase.

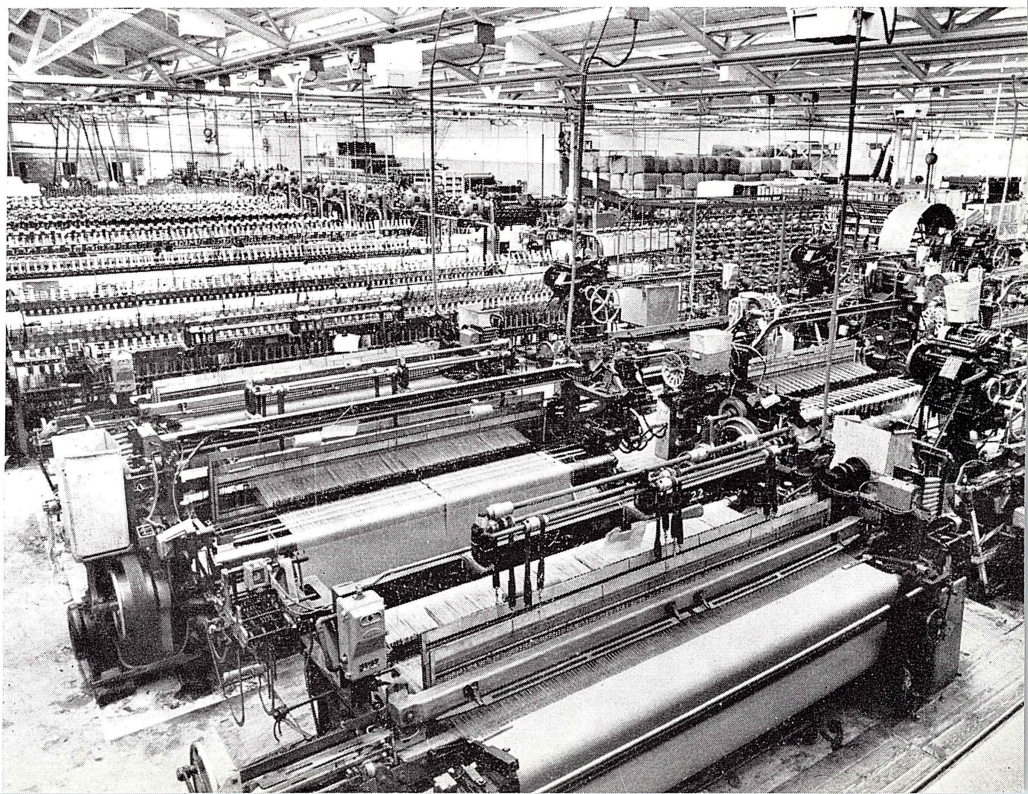
Christchurch and the surrounding plains have many natural advantages for industrial growth. There is plenty of flat land, abundant power, an even greater power potential, and adequate pure water supplies.

Factories had their beginnings in Canterbury shortly after the first settlers arrived, and there has been steady expansion throughout, expansion accelerated by the Depression and then by the Second World War. Since the war, with an easing of building restrictions, many new factories have been built in Christchurch, and some of them are the result of British enterprise joining with New Zealanders to process the raw materials from abroad.





INTERIOR VIEWS OF MODERN CHRISTCHURCH FACTORIES





Manufacturing engineers need the iron and steel from abroad with which to make their heavy agricultural machinery; rubber factories must have the raw materials with which to make motor car and bicycle tyres, the latter most important for a city with the second greatest bicycle population of the world, it is said; and a host of other manufacturers rely on Lyttelton to cater for the ships which bring them the materials they need to make the goods demanded by a growing consumers' market.

As population increases and the high prosperity of the country remains, there is a growing market for motor cars. These too, either in parts for assembling in Christchurch's modern assembly works, or completely built, come in through Lyttelton. The port is also the major South Island centre for the importation of oil and motor fuel, the major oil companies having established bulk installations on reclaimed land at the port.

### **Railway Port**

The New Zealand Government Railways have played a big part in the development of Lyttelton from the time the tunnel was driven through in 1867.

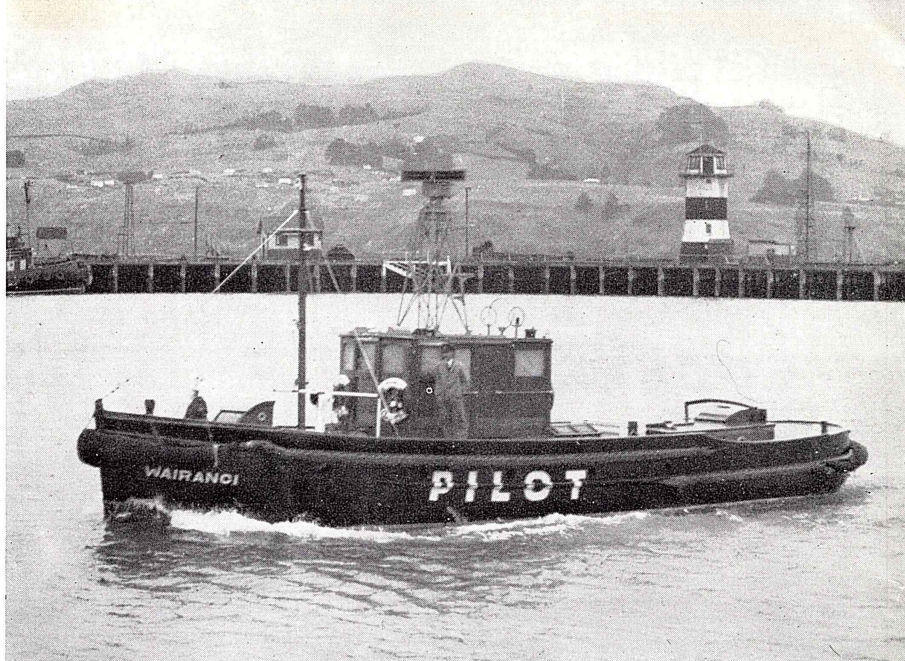
The port is in fact a railway port, the Railways supplying the transport and handling of goods and cargo. Lines are laid on all the main wharves and connected with the railway system of the South Island.

Goods and cargo are landed or shipped direct into or from the railway waggons, inward cargo requiring sorting being hauled direct to Christchurch where the Railway transit and sorting sheds are situated.

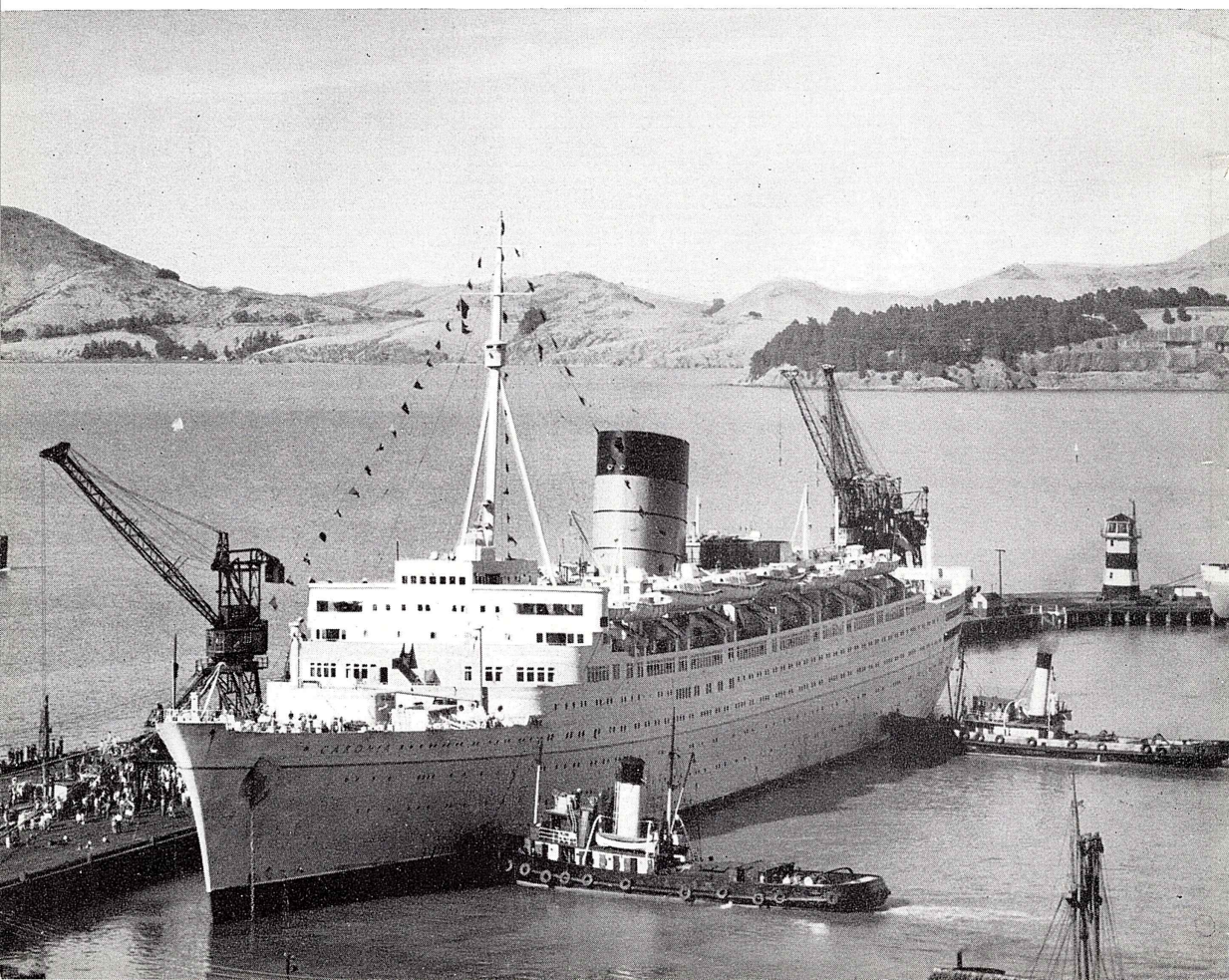
The important part of the Railways was forced upon the port by geographical position, but with the progress made and the advent of the road tunnel the Railways will give way to a large extent to faster road transport handling imported goods direct from wharf to warehouses.



*Right:* THE BOARD'S  
PILOT CUTTER  
WAIRANGI DURING  
RADAR TRIALS



*Below:* R.M.S. CARONIA  
BERTHING AT  
GLADSTONE PIER  
DURING A WORLD  
CRUISE





# Entering Harbour

## Port Limits

The limits of the port are three miles from the northern part of Adderley Head. The entrance between the Heads is one nautical mile wide and the port is easily accessible in all weathers. The anchorage off Camp Bay is good, with a soft mud bottom at  $7\frac{1}{2}$  fathoms. All overseas vessels awaiting pratique, quarantine, or pilotage are required to anchor there.

## Pilotage

Pilotage is compulsory. The Board has five pilots, including the Harbour-master, who is also Chief Pilot, and they are supplied to vessels requiring their services from the pilot cutter *Wairangi*, which is equipped with radio-telephone, direction-finder and radar; and which will meet vessels anywhere within the port limits.

## Tugs

Two steam tugs are operated by the Board—*Lyttelton* (850 h.p.) and *Lyttelton II* (1250 h.p.). To obtain a tug's services the day signal is Flags YA International Code, and a continuous watch is kept at the Gladstone Pier signal station, so vessels making the signal can be seen.

## Navigation Aids

*Light Godley Head.* A group flashing white light showing three flashes every 26 seconds visible 24 miles, is situated on Godley Head 317 feet above high water, and about 100 feet from the top of the cliff.

*A Lighted Whistling Buoy* is moored off the entrance to the harbour, in a position ten cables from Godley Head and seven and a-half cables from Adderley Head. The 750-c.p. flashing white light is sixteen feet above water, is visible nine miles in clear weather, and gives a flash every three seconds. The buoy carries a 10-in. wavemotion-actuated air whistle. A diamond-shaped radar reflector is mounted on top of the buoy.

*Parsons Rock Buoy.* A white and red chequered buoy showing a flashing white light (2 flashes) every 10 seconds, visible  $5\frac{1}{2}$  miles, height 9 feet above sea level, with a radar reflector mounted on the top of the buoy. The buoy is



moored 1,380 feet from the centre line of the channel and 1,200 feet from Parsons Reef.

*Fog Signals.* The N.Z. Government Marine Department maintains on Godley Head a fog diaphone, sounding one blast every minute (blast 3 secs.), just below the lighthouse on the head and at an elevation of 270 feet.

*Signal Station.* A black and white tower on the knuckle of Gladstone Pier 53 feet above high water equipped with flags, 10 in. signal day-lamp, and radio-telephone. The call sign is Z.L.H.L. and a listening watch is kept for 15 minutes at each and every hour.

*Inner Harbour.* The Harbour Board maintains on the small lighthouse situated at the end of the eastern mole at the inner harbour entrance, an electrically-operated fog bell ringing every 20 secs. (bell 5 secs). The sound is muffled in the inner harbour from 170 degrees to 286 degrees.

*Fog Signal on Sticking Point.* An electrically-operated fog signal sounding a low note every 30 seconds—thus: sound 5 seconds, silence 25 seconds. The horn will sound into the harbour in a south-easterly direction.

*Beacon Lights for Marking the Dredged Channel.* Two beacons with automatic flashing lights have been erected for leading lights as a guide to enable deep draught ships to keep in the dredged channel. The front beacon is about three cables off the harbour entrance in sixteen feet of water, and the rear beacon (which is higher than the front one) is on Shag Reef. A flashing red light every one and a-half seconds (flash  $\frac{1}{2}$  sec., eclipse 1 sec.) is shown from the front beacon and a white flashing light every five seconds (flash 2 secs., eclipse 3 secs.) from the rear beacon. These beacons, in line with one another, at  $260\frac{1}{2}$  degrees, mark the centre of the dredged channel. Two small beacons, in line 302 degrees, and each exhibiting a fixed triangular neon sign, are situated on Naval Point reclamation to indicate when to turn up towards the inner harbour entrance. The turning point is also indicated at night by a fixed red light showing on the eastern breakwater and bearing 318 degrees.

*Navigation Lights.* Camp Bay—Two fixed red lights, in line  $195\frac{1}{2}$  degrees, to facilitate night navigation and anchoring, are situated in Camp Bay.

### **Dredged Channel**

The dredged channel of about two miles and a half in length and approximately 600 ft. in width, has a depth of 32 feet at low water, maintained by constant dredging with the Board's suction dredger *Canterbury*.

The maximum permissible draught of vessels is 33 feet at high water and 29 feet at low water. The maximum length of vessels to use the port is 800 feet.

Largest vessel to enter the port was the R.M.S. *Caronia*—715 feet overall, 92 feet beam, draught 30 feet—which berthed at Gladstone Pier East in 1954 during a luxury cruise.

T.S.S. *Ceramic*—length 655 feet overall, 70 ft. beam, draught 33 feet 6 inches both forward and aft—was the deepest draught vessel to use the port. That was in 1942.





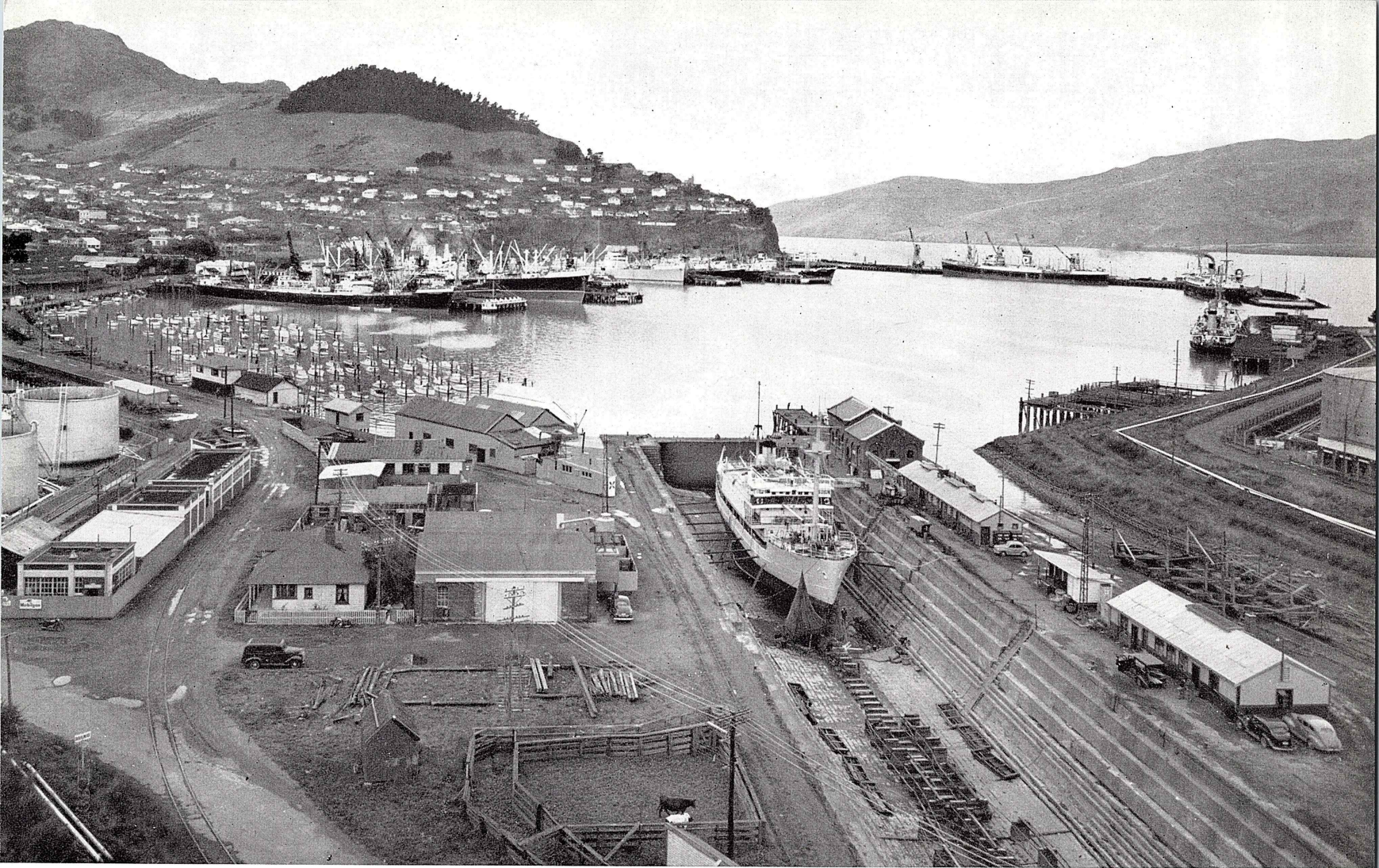
AN AERIAL VIEW OF LYTT





TON LOOKING NORTH-EAST





THE INNER HARBOUR, WITH A SECTION OF THE GRAVING DOCK IN FOREGROUND  
AND THE OIL WHARF AT RIGHT CENTRE



# Inner Harbour

THE INNER HARBOUR with an enclosed water area of 106 acres, is bounded by an eastern mole of rock and stone, and a western reclamation area of  $71\frac{1}{2}$  acres where the oil tanks and tanker berth are situated. The breakwaters are protected or faced with large stone blocks.

The eastern breakwater, 2010 feet long with a width of 40 feet at the top, has an elevation of six feet above high-water spring-tide, and has a timber breastwork along its inner face—known as Gladstone Pier.

The western breakwater, or Naval Point, was formerly 1400 feet long, but is now almost entirely incorporated with the reclamation area. Along its inner harbour face are breastwork wharves providing berthage for vessels carrying bulk fuel oil.

## Berths

Water inside the breakwaters and at various wharves varies from 20 feet to 38 feet at low tide. The range of the tide is about 7 feet spring tides, 5 feet neap tides. With the exception of the low level breastwork which is used by fishing craft, virtually all wharves and jetties have sufficient depth to accommodate fully laden overseas vessels.

Accommodating 10 overseas vessels and six inter-colonial or coastal ships, the 17 berths with length and soundings are:—

	<i>Length</i>	<i>Soundings</i>
Gladstone Pier West	608'	33' —38'
Gladstone Pier East	1093'	$34\frac{1}{2}'$ — $37\frac{1}{2}'$
No. 1 Breastwork	685'	$26\frac{1}{2}'$ —35'
No. 2 East	893'	$33\frac{1}{2}'$ —37'
No. 2 West	861'	29' —44'
No. 3 East	643'	28' —37'
No. 3 West	730'	33' —38'
No. 4 East	476'	31' —36'
No. 4 West	558'	29' —38'
No. 5 East	286'	27' —30'
No. 5 West	340'	22' — $30\frac{1}{2}'$
No. 6 East	599'	34' —38'
No. 6 West	715'	$33\frac{1}{2}'$ —36'
No. 7 East	506'	33' —38'
No. 7 West	498'	35' —38'
Oil Wharf	664'	35' —37'
Cattle Wharf	183'	26' —31'
Total effective berthage	<u>10,338'</u>	





*Above:* BULK  
PHOSPHATE BEING  
DISCHARGED INTO  
RAILWAY WAGONS



*Left:* THE INTER-  
ISLAND STEAMER-  
EXPRESS *MAORI*,  
BERTHED AT No. 2  
WEST



## Railway Wharves

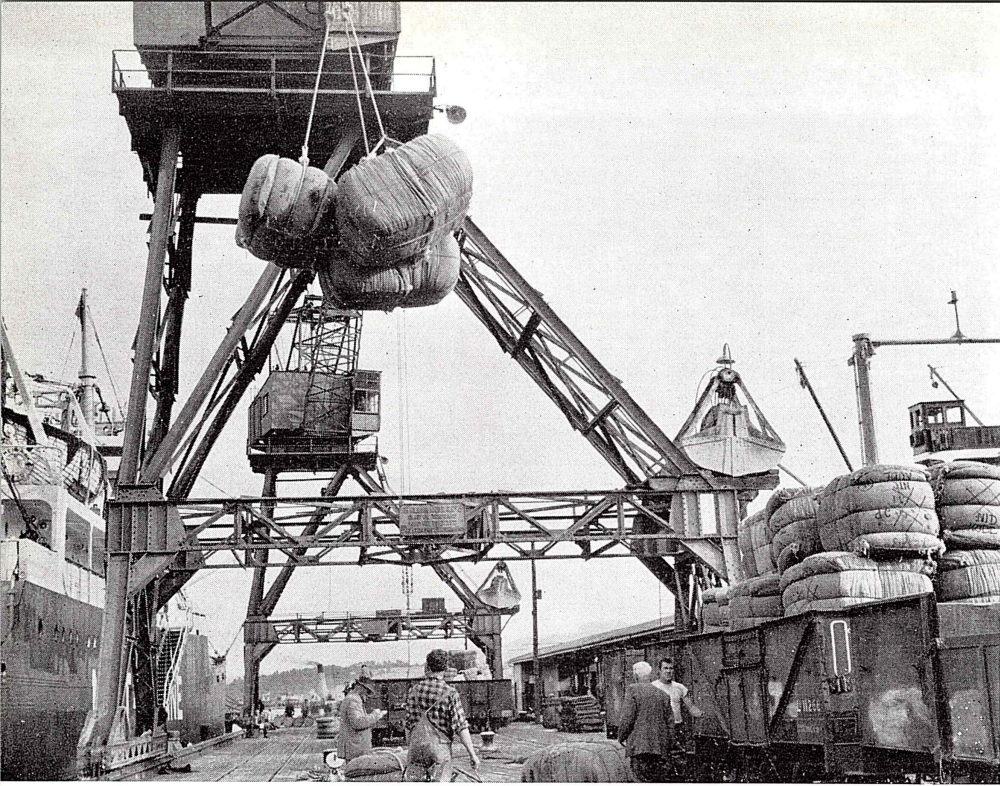
All the wharves are constructed of hardwood, and all except the oil wharf have railway tracks laid on them. The wharf decking is 13 ft. 4 in. above zero of low water.

## Steamer Express

No. 2 wharf has been the berth for the Lyttelton-Wellington steamer express for many years. The steamer express service, operated by the Union Steam Ship Co. Ltd., provides the main link between the North and South Islands and is run every week night and Saturdays. Regular ships on the 10½ hour run are the 8303-ton *Maori* and the 6911-ton *Hinemoa*.

The wharf accommodates the Invercargill-Dunedin-Christchurch express train. A special passenger train runs between the wharf and Christchurch direct to connect with the arrival and departure of each steamer express. A covered passenger platform on the wharf provides direct access from train to steamer's gangway.

Passengers' cars are carried on the steamer express, being driven to and from the ship's side. Approximately 25,000 passenger-accompanied cars are transported between Lyttelton and Wellington each year, and the passengers number over 300,000 yearly.



LOADING WOOL AND MEAT





# Working the Wharves

## **Waterside Workers**

Provision for the regulation, control and performance of waterfront work and all matters relating to the employment of waterside workers, including the payment of wages, at New Zealand ports is made by the Waterfront Industry Act, 1953, under which the Waterfront Industry Commission and the Waterfront Industry Tribunal are constituted. These authorities' functions were formerly provided for by Government regulations. In the main, the functions and powers of the Commission are to carry out administrative work in connection with the employment of and payment of wages to waterside workers. The commission is empowered to impose levies on the owners, agents or masters of ships and all other employers of waterside labour for carrying out its functions and, in particular, for the following purposes:—(a) providing and operating labour engagement bureaux and central pay offices; (b) providing for guaranteed minimum payments to watersiders; (c) providing for pay for holidays allowed to waterside workers; (d) fixing rates of remuneration for work performed under a system of payment by results known as co-operative contracting, under which the men receive a bonus on a tonnage or unit basis; (e) providing and operating amenities for waterside workers, including waiting rooms, restaurants, canteens and first-aid rooms.

In exercising its powers and functions, the Tribunal has regard to the necessity for promoting the efficiency of waterside work by ensuring the full and proper utilisation of labour for the purpose of facilitating the rapid and economical turn-round of vessels and the speedy transit of goods through ports.

The Tribunal prescribes rates of payment and conditions under which labour may be employed, and decides disputes that arise, and takes such action as it thinks fit to prevent and settle disputes. It also determines appeals from decisions of Port Conciliation Committees or the National Amenities Committee.

Lyttelton, in common with other ports, has its own Port Conciliation Committee, on which there is a Government-appointed representative as an independent chairman, representatives of the Port Employers' Association, the Waterside Workers' Union, and the Railways Department. This Committee deals locally with matters coming under the jurisdiction of the Tribunal.



THE WATERFRONT WORKERS' CENTENNIAL HALL



## **Bureau System**

The bureau system for the engagement of waterside labour is established at Lyttelton. The aim of the system is to equalise, as far as possible, the employment and earnings of registered waterside workers. Workers are employed on an hourly basis, with provision for daily attendances, minima and guaranteed weekly earnings.

The working of the bureau is controlled by a manager directly responsible to the Port Conciliation Committee and the Waterfront Industry Commission. The cost of operating the system, and also any financial loss which might be involved by providing guaranteed weekly and daily payments is met from the levies charged against waterside employers.

There are 725 registered waterside workers at Lyttelton. When union labour is fully absorbed during busy periods casual labour may be engaged, if available.

## **Hours of Work**

The hours of work on the wharves from Monday to Friday are 8 a.m. to noon, 1 p.m. to 5 p.m., 6 p.m. to 9 p.m., Saturdays 8 a.m. to noon. For a vessel which is sailing on Saturday work is continued to 5 p.m., and for a vessel sailing and finishing cargo on that day extended hours will be worked. No work is done on Sundays.

## **Wharf Holidays**

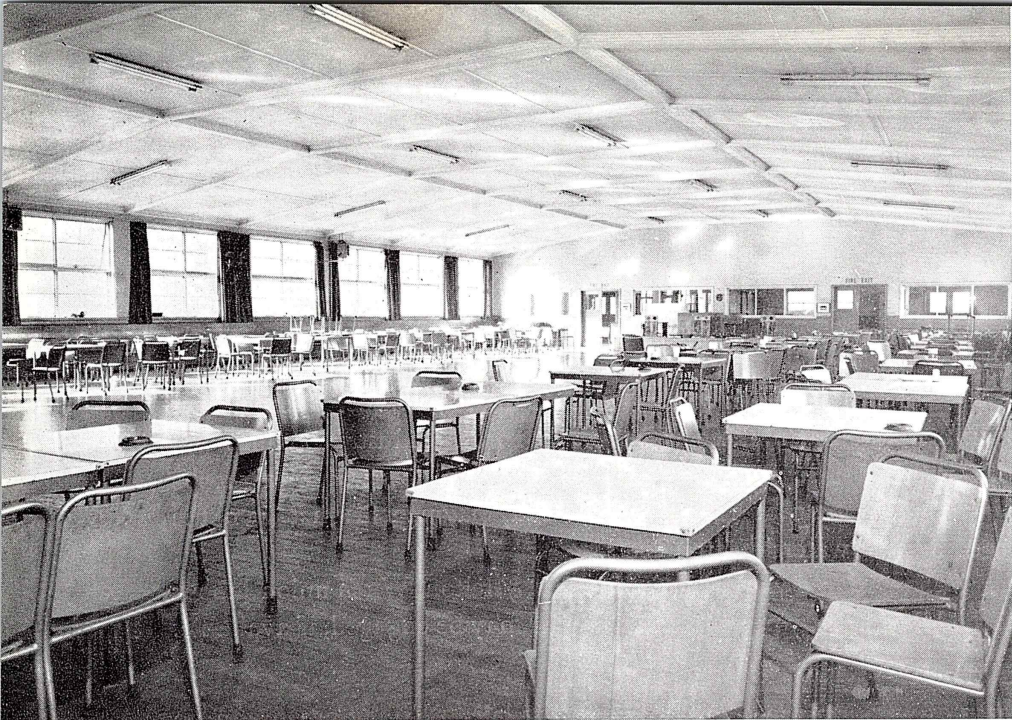
Waterside workers' holidays are:— New Year's Day, January 2 (in lieu of Anniversary Day), Anzac Day (April 25), Good Friday, Easter Monday, Queen's Birthday (first Monday in June), Labour Day (fourth Monday in October), picnic day (Show Day, usually the second Friday in November, is taken in lieu of this day in Lyttelton), Christmas Day, Boxing Day.

## **Workers' Assembly Hall**

The 6000 square foot Waterfront Centennial Hall is one of the biggest assembly halls in New Zealand. Built by the Harbour Board and opened in 1954 for the port's waterside workers, it has a large labour bureau office and pay office on the first floor, a first aid room, two large locker rooms, hot showers, wash basins and conveniences.

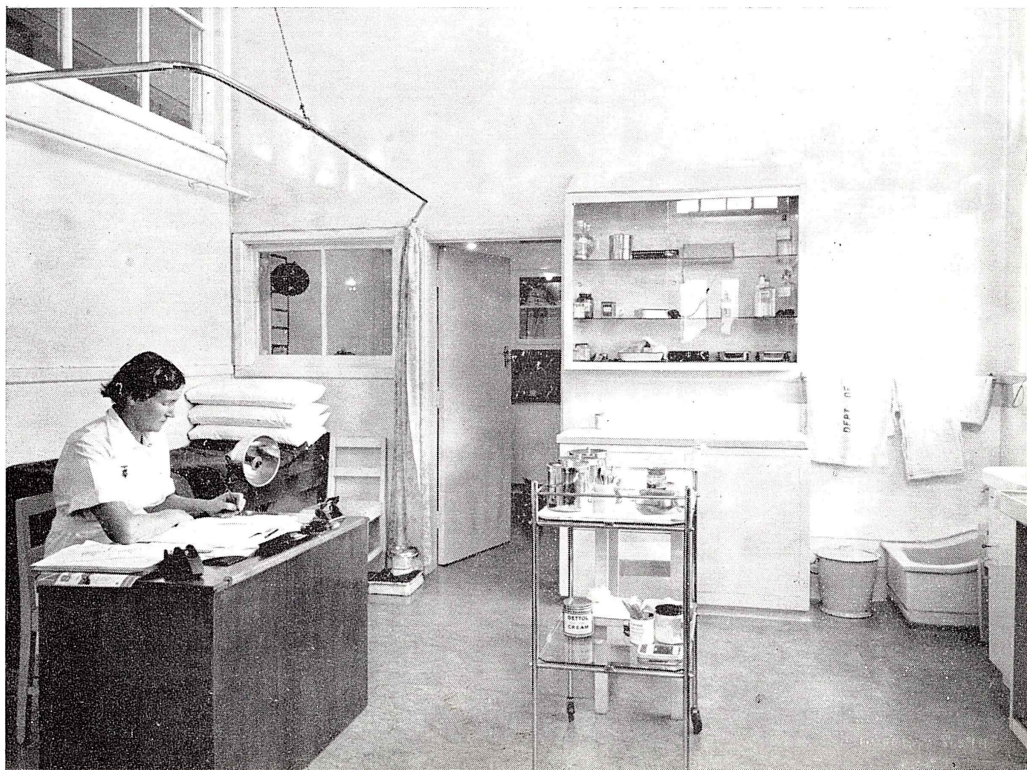
The second locker room is on a mezzanine floor (there are nearly 800 lockers with space for another 200). Also on the mezzanine floor are more showers and wash basins and a heated room for drying clothing.





AN INTERIOR VIEW OF THE CENTENNIAL HALL

THE FIRST AID CLINIC





Upstairs there is a library, a reading room, and a large assembly hall with an adjacent kitchen. The kitchen has large ovens, food-preparing machinery and a refrigerator, while another room is equipped with electric hot plates for the men who take their own lunches.

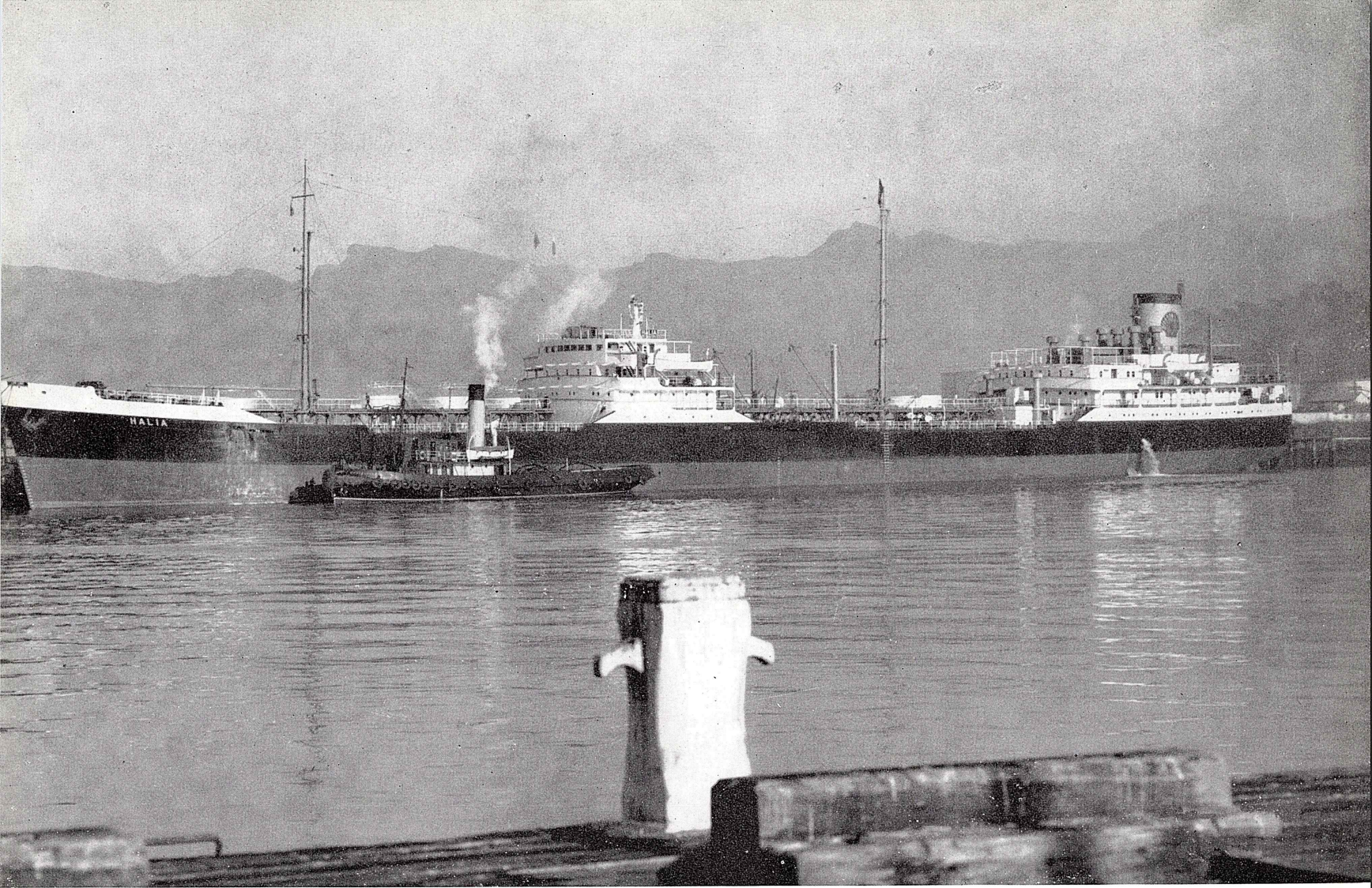
At two other points around the wharves there are cafeterias for the use of men during meal breaks.

### **First Aid**

The wharves are equipped with ambulance stretchers and first aid boxes. A free ambulance service is maintained by the Lyttelton sub-centre of the St. John Ambulance Brigade.

The Health Department operates an industrial health clinic at the port, with a full-time registered nurse in attendance during the day-time.





AN EARLY MORNING DEPARTURE FROM THE OIL WHARF



# Service and Amenities

## Wharf Lighting

The wharves and railway yards are well lighted by electric lamps. Connections are also provided for temporary lighting on board ships for working cargo, equipment and electric current being provided by the Harbour Board, which acts as a Power Supply Authority.

## Telephones

Automatic telephones connected with the telephone system throughout New Zealand are supplied to all vessels requiring them.

## Bunkering

A coal bunkering service is maintained at the port by the State Coal Department.

Fuel for bunkers is obtainable at the Board's oil wharf which is served from the neighbouring oil companies' installations on reclaimed land.

## Fresh Water and Fire Prevention

To provide for fire-fighting and to supply shipping, the whole of the wharves are supplied with fresh water, under high pressure, from the Lyttelton Borough Council's main. Water for vessels' use is supplied by the Council at 5/- per 1000 gallons.

An additional fire precaution is provided by the Board's tugs, and the grab dredge *Te Whaka*, being fitted with powerful steam fire pumps and "Foamite" oil-fire plant. The Lyttelton Volunteer Fire Brigade is also available on call.

## Electric Cranes

Gladstone Pier, No. 1 Breastwork and Wharves Nos. 2, 3, 6 and 7 are equipped with electric portal cranes for handling general cargo and/or grabbing bulk cargo. There are 28 cranes on the wharves—24 five-ton and 4 three-ton and the Board has another 4 five-ton cranes on order.

The cranes travel along the wharves under their own motive power, and three lines of railway waggons may pass under the portals.





*Above:* WAGGONS OF  
CARGO BEING  
MOVED BY ELECTRIC  
CAPSTAN



*Left:* A SECTION OF A  
CHEESE STORAGE  
CHAMBER IN THE  
COOL STORES



## Electric Capstans

For the expeditious moving of railway waggons on the wharves and store sidings, the Harbour Board provides electric capstans free of charge on all wharves. They can exert a pull of one ton at 180 ft. per minute, which allows hauling a rake of full or empty waggons of an aggregate weight of 150 tons. The Railways Department supplies the ropes, and its employees operate the capstans.

## Floating Crane

The Board's self-propelled 80-ton floating crane *Rapaki* is available for hire for heavy lifts. Its lifting capacity is 80 tons at a 40 ft. radius; 60 tons at a 65 ft. radius; and 15 tons at an 80 ft. radius.

## Graving Dock and Patent Slip

The Graving Dock, opened in 1883, will accommodate a vessel of 462 feet by 54 feet beam and 18 feet draught. The Harbourmaster is Dockmaster and deals with applications for use of the dock, general dimensions of which are:—

Top length	481 feet
Floor length	450 „
Top width	82 „
Floor width	46 „
Entrance width	62 „
Width where ship's bilge should be	54½ „
Still depth at high water	23 „

The Patent Slip will take vessels of 250 tons dead weight with a maximum length of 115 feet. The Graving Dock and Patent Slip are electrically operated.

## Ship Repairs

Shipwright work and engineering repairs to hull or machinery are undertaken by firms whose premises and equipment are situated in the port.

## Cool Stores

The Harbour Board has cool and freezing chambers near No. 7 wharf, chiefly for the accommodation of butter and cheese to be graded and stored for export. The building is divided into 10 separate compartments—seven of 85 tons capacity each and two of 35 tons capacity, with grading and testing





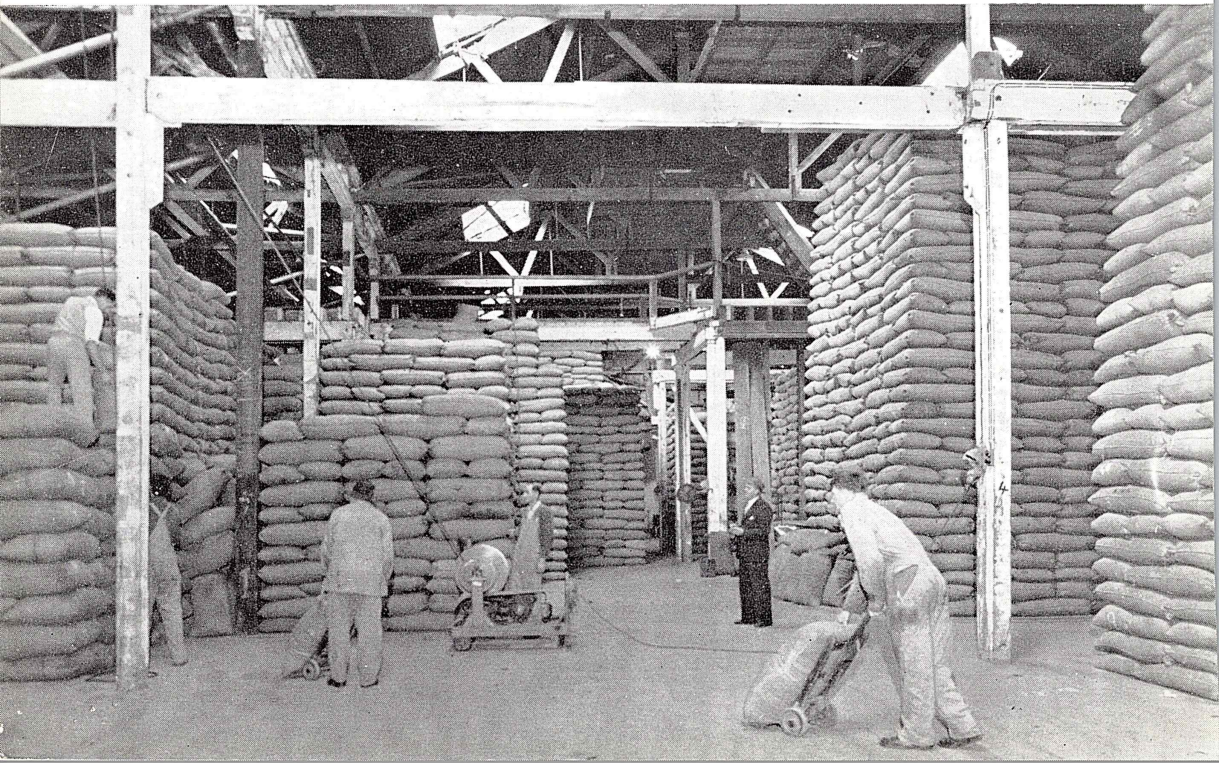


*physical position of the Port of Lyttelton; it is not drawn to scale.*





*Left:* BUTTER BEING  
OUTLOADED FROM  
COOL STORE FOR  
HAULAGE TO SHIP



*Below:* A SECTION OF  
ONE OF THE BOARD'S  
GRAIN STORES



rooms for the use of Government dairy produce graders. The chambers may be used independently of each other for cool storage or freezing chambers as required.

There are special chambers for the cool storage of cheese with a total capacity of 5700 crates, and two additional cheese chambers in the Board's No. 1A store can accommodate another 7400 crates.

Since 1894, dairy produce for export from Lyttelton has passed through the Board's cool stores for inspection and grading by the Government inspector before export.

The Harbour Board's Challenge Cup for Export Cheese is a trophy given to encourage good-quality cheese, and competition for it every year is keen between the cheese factories of Banks Peninsula.

There is storage available for 30,000 cases of butter, and it is delivered to the ship's side at a temperature of 16 degrees Fahrenheit.

### **Grain Storage**

The Board provides space for the storage of grain and agricultural produce in its Nos. 1, 1A and 5 Stores, and has a capacity of 10,000 tons. The stores are equipped with electrically-operated handling appliances, electric capstans and weighbridges.

### **Wool Dumping**

Two shipping companies—the New Zealand Shipping Company Ltd., and the Shaw Savill and Albion Company Ltd.—operate wool dumping stores at the port. The first-mentioned has storage space for 15,000 bales and the second for 10,000 bales, and both have a dumping rate of 150 bales per hour.

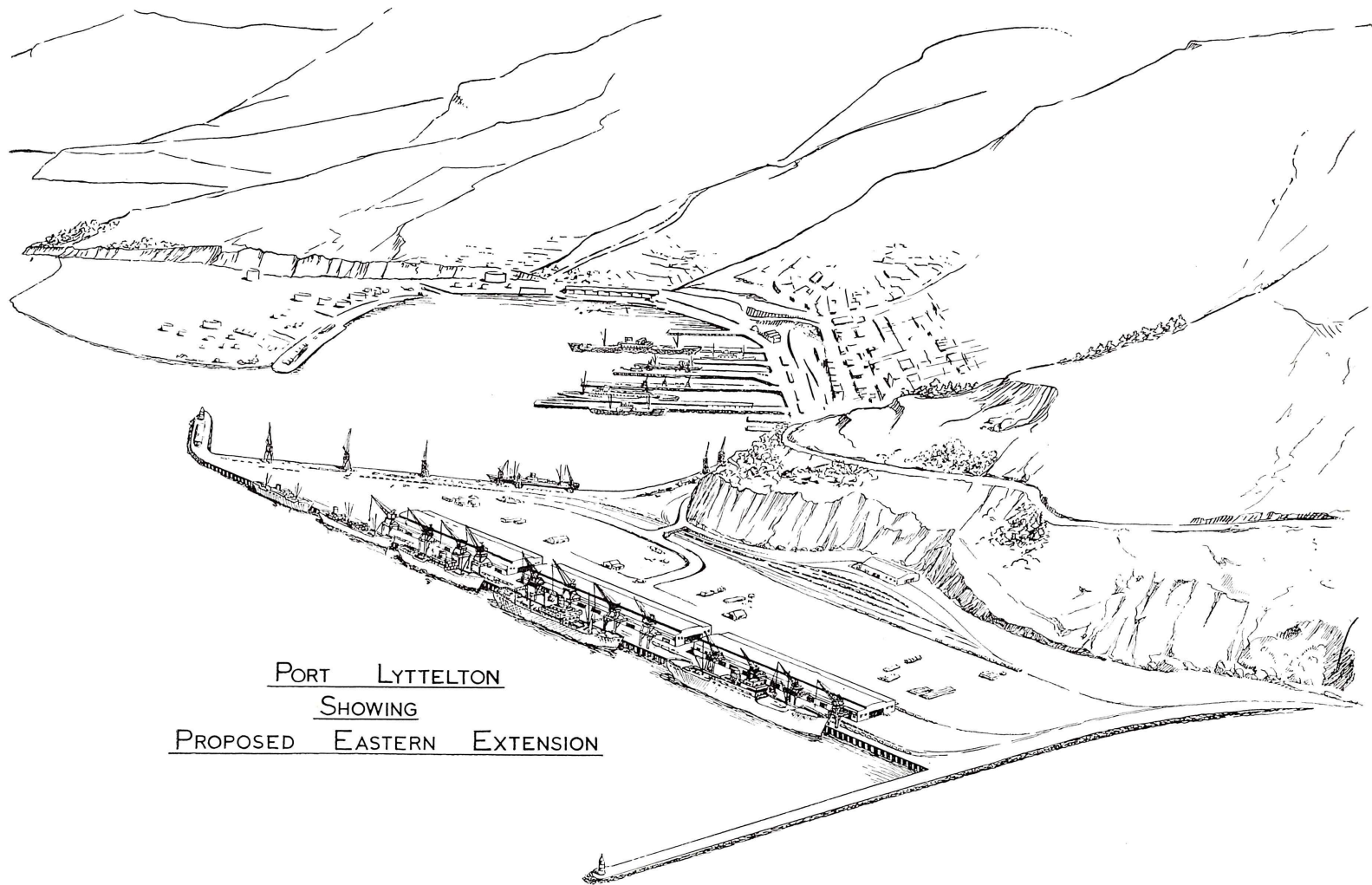
### **Harbour Board Offices**

Administrative offices of the Harbour Board are in Cathedral Square, Christchurch, but at the Port of Lyttelton the Board has offices in Norwich Quay. The local Office Manager at the port is Mr. G. C. R. Burnip, and the Harbourmaster, Captain A. R. Champion, has his office there.

### **Charges**

Particulars of the various charges levied by the Lyttelton Harbour Board are given in a separate booklet which is available on application to the Secretary-Manager, P.O. Box 2108, Christchurch.





PORT LYTTELTON  
SHOWING  
PROPOSED EASTERN EXTENSION

# The Future

## Harbour Improvement

With the increase in trade, and the changing pattern of the trade, with greater emphasis on imports, more berthage is required at Lyttelton, and after investigation over several years, the Lyttelton Harbour Board has authority by an Act of Parliament passed in 1955 to proceed with its expansion plan involving the spending of about £3½ million.

Additional berths cannot be created within the shell of the inner harbour, and a new breakwater is to be built to the east of the present harbour. Within its protection, the board is to provide some 3000 feet of new berthage, with modern transit sheds, wharf cranes and facilities for road and rail access.

The wharf is to be built about 500 feet out from and parallel to the present shoreline, and is to be protected by a single breakwater at its eastern extremity, projecting 700 feet southward to reach the limit of the existing channel.

Forty acres are to be enclosed, and will be reclaimed partly by filling with the material which is dredged to deepen the navigable area in front of the berths, the remaining filling and facing being of material quarried from adjacent hillsides.

Three single-storey transit sheds, each 600 feet by 120 feet, are to be built and set back about 70 feet from the wharf edge. They will be served by three rail tracks in front and two at the back, together with a 100 ft. roadway connected at the rear of the sheds by a bridge over the rail tracks to the existing roadway, Gladstone Quay.

Landward of the roadway there will be provided a large open space for the stacking and storage of non-perishable cargoes and the parking of vehicles awaiting unloading and loading.

Much investigation was required before the plan was adopted, and it included a hydraulic model tested in Britain.

## Road Tunnel

While the work of the harbour improvement programme is going on, construction of the Lyttelton-Christchurch Road Tunnel will also be proceeding. Advanced for many years as a major Christchurch need, the project took the first positive step forward, when, in 1956, an Act was passed setting up a Road





AN ARTIST'S SKETCH OF THE BOARD'S NEW ADMINISTRATION BUILDING IN CHRISTCHURCH

Authority and giving a guarantee of Government support. The Authority has now been constituted, the route has been approved and steady progress is envisaged in the plan of work.

### **New Dredger**

To maintain its development of the port, and to keep it at its maximum efficiency, the Harbour Board has invited tenders for the construction of a new dredge at an approximate cost of £750,000.

This vessel will be a stern-well trailing suction hopper dredger, a feature new to any dredger being the trailing twin contra-rotating cutter. The dredger will be able to load 52,000 cubic feet in 17 minutes and will have a steaming speed of ten and a half knots. Both the total hopper volume and the speed are about fifty per cent higher than those of the existing dredger *Canterbury*.

### **Administration Building**

Work has begun on a new administration block for the Harbour Board in Christchurch. On the corner of Madras Street and Oxford Terrace, a few minutes' walk from the centre of the city, the board is building a six-storey block which will be the city's most modern office building.

The six floors will be naturally lit on four sides, and the exterior will be unmarred by pipes or fire escapes. The building will have 28,000 square feet of floor area.

The new building, which should be completed in 1958, will allow the board to group its administrative staff more efficiently than at present, and with its own parking space, will provide easier access for the public and visitors to the office. The board will occupy the ground, fourth and fifth storeys, the others being let for office accommodation.

### **Elevated Roadway**

As part of its plan to cater for road transport when the tunnel road is completed, the Harbour Board has planned an elevated roadway from the Lyttelton borough streets across to the steamer-express wharf.





A VIEW OF LYTTELTON HARBOUR, LOOKING SOUTH



# General Information

## **Lloyd's Agents and Surveyor**

Lloyd's agents in Lyttelton and Christchurch are Kinsey and Company, Ltd.

Bureau Veritas and the American Bureau of Shipping also are represented. The services of a cargo surveyor are also available.

## **Diplomatic Offices**

There are Consuls in Christchurch for Belgium, Denmark, the Netherlands, France, Italy, Sweden, Norway and the United States of America.

## **Trade Commissioner**

The Australian Government has established in Christchurch a Trade Commissioner's Office for the South Island. The Commissioner's office is at 89 Worcester Street.

## **Public Relations**

The Canterbury Public Relations Office is located at 138 Oxford Terrace, Christchurch, and its comprehensive information services are available to visitors, tourists and industrialists.

## **Chamber of Commerce**

The Canterbury Chamber of Commerce is situated at the corner of Worcester Street and Oxford Terrace, Christchurch.

## **Manufacturers' Association**

The Canterbury Manufacturers' Association represents a major proportion of the province's manufacturing industries. Its office is at 263 Cambridge Terrace, Christchurch.

## **Sailors' Welfare**

The British Sailors' Society has a Seamen's Institute in Norwich Quay, Lyttelton.



# Shipping

Arrivals in the Inner Harbour at the Port of Lyttelton during the 69 Years and 9 months ended 30th September, 1957, respectively.

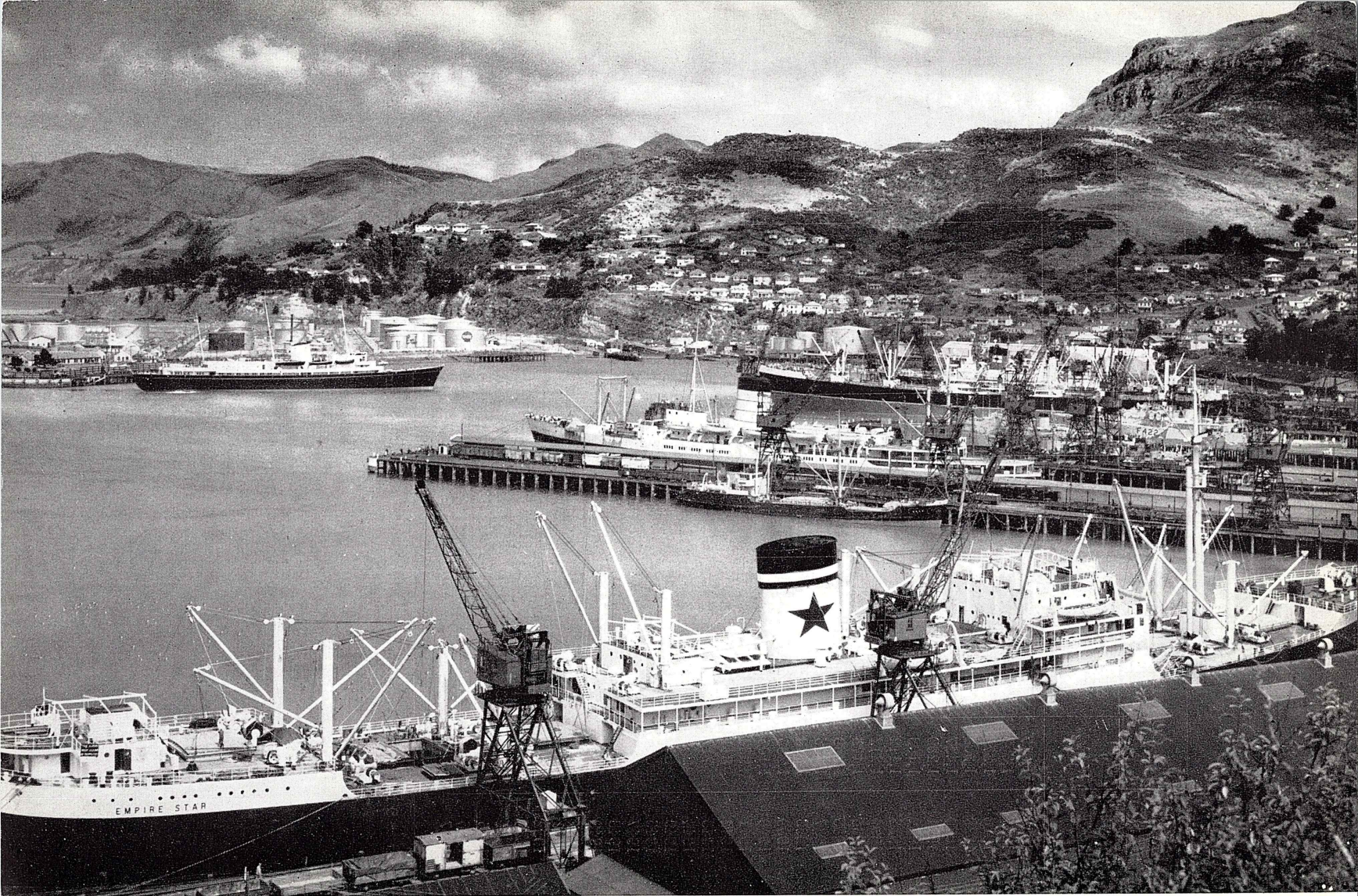
YEAR	COASTAL		INTERCOLONIAL		FOREIGN		TOTAL	
	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net
1888	1,402	238,382	215	215,540	83	148,765	1,700	602,687
1889	1,433	249,848	256	249,931	75	124,172	1,764	623,951
1890	1,334	234,857	216	260,270	84	156,782	1,634	651,909
1891	1,327	246,421	236	256,642	81	189,248	1,644	692,311
1892	1,267	251,649	215	252,693	103	227,632	1,585	731,974
1893	1,178	303,061	224	252,550	88	187,888	1,490	743,499
1894	1,156	336,620	251	273,746	78	191,357	1,485	801,723
1895	1,179	360,830	253	299,904	96	243,502	1,528	904,236
1896	1,199	353,969	248	292,493	83	223,519	1,530	869,981
1897	1,162	407,887	235	300,312	84	228,756	1,481	936,955
1898	1,141	399,992	237	338,501	69	194,178	1,447	932,671
1899	1,145	515,179	243	371,626	107	298,193	1,495	1,184,998
1900	1,084	496,996	212	335,119	102	352,012	1,418	1,184,127
1901	1,088	614,480	267	425,578	128	407,313	1,483	1,447,371
1902	1,194	673,098	258	420,488	114	401,379	1,566	1,494,965
1903	1,167	656,241	254	452,480	124	513,492	1,545	1,622,213
1904	1,218	711,267	241	452,467	125	516,180	1,584	1,679,914
1905	1,310	811,707	237	446,347	126	548,379	1,673	1,806,433
1906	1,324	849,391	253	511,938	136	593,247	1,713	1,954,576
1907	1,226	881,256	235	497,337	127	534,895	1,588	1,913,488
1908	1,274	943,389	251	546,497	142	589,653	1,667	2,079,539
1909	1,453	989,164	223	490,669	157	651,145	1,833	2,130,978
1910	1,841	1,092,016	189	411,844	146	651,499	2,176	2,155,359
1911	1,858	940,149	236	457,981	171	738,921	2,265	2,137,051
1912	1,905	1,004,832	229	512,035	155	728,861	2,289	2,245,728
1913	1,779	922,249	235	549,574	134	596,215	2,148	2,068,038
1914	1,634	939,126	286	605,844	155	650,825	2,075	2,195,795
1915	2,022	951,160	233	454,660	134	564,673	2,389	1,970,493
1916	1,862	837,422	152	289,464	111	506,349	2,125	1,633,235
1917	1,759	743,853	136	254,737	88	404,868	1,983	1,403,458
1918	1,704	737,435	82	147,141	55	244,324	1,841	1,128,900
1919	1,730	764,215	85	161,005	74	352,982	1,889	1,278,202
1920	1,171	749,208	142	259,576	110	521,813	1,423	1,530,579
1921	1,145	693,879	151	220,637	141	602,461	1,437	1,516,977
1922	1,244	733,703	127	192,847	145	699,459	1,516	1,626,009
1923	1,321	832,767	98	179,949	177	837,498	1,596	1,850,214
1924	1,282	814,366	93	187,772	177	865,876	1,552	1,868,014
1925	1,275	857,733	82	164,605	198	899,399	1,555	1,921,737

## Shipping—Contd.

YEAR	COASTAL		INTERCOLONIAL		FOREIGN		TOTAL	
	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net	Vessels	Register Tonnage Net
1926*	1,017	697,529	59	131,614	150	704,491	1,226	1,533,634
1927	1,363	924,881	72	146,985	175	830,199	1,610	1,902,065
1928	1,378	921,645	49	103,804	183	886,781	1,610	1,912,230
1929	1,368	955,622	57	106,612	185	921,337	1,610	1,983,571
1930	1,427	942,448	55	110,911	191	976,821	1,673	2,030,180
1931	1,239	914,248	57	93,216	179	927,528	1,475	1,934,992
1932	1,103	1,001,392	57	68,419	157	825,197	1,317	1,895,008
1933	1,112	1,023,694	61	69,885	176	910,370	1,349	2,003,949
1934	1,212	1,036,187	63	78,103	166	829,162	1,441	1,943,952
1935	1,173	1,000,147	79	116,162	173	896,553	1,425	2,012,862
1936	1,369	986,360	71	118,290	195	987,830	1,635	2,092,480
1937	1,346	1,012,903	73	131,963	203	1,044,582	1,622	2,189,448
1938	1,228	1,020,109	67	119,995	210	1,071,049	1,505	2,211,153
1939	1,235	1,027,166	67	120,904	197	1,005,427	1,499	2,153,497
1940	1,105	1,013,779	61	90,516	150	823,511	1,316	1,927,806
1941	989	930,507	48	65,366	86	403,674	1,123	1,399,547
1942	811	801,012	41	63,388	82	421,460	934	1,285,860
1943	717	817,374	44	63,337	98	440,596	859	1,321,307
1944	652	796,580	32	42,370	87	385,877	771	1,224,827
1945	655	807,806	32	45,437	70	348,190	757	1,201,433
1946	595	718,810	29	40,872	123	656,864	747	1,416,546
1947	644	982,387	26	34,196	153	757,791	823	1,774,374
1948	608	1,053,938	22	29,003	166	799,779	796	1,882,720
1949	687	1,065,065	31	39,484	165	798,429	883	1,902,978
1950	670	1,066,088	26	32,977	178	862,176	874	1,961,241
1951	555	971,630	17	19,106	161	789,276	733	1,780,012
1952	684	1,121,891	32	45,203	227	1,115,425	943	2,282,519
1953	825	1,144,060	57	93,586	190	926,716	1,072	2,164,362
1954	835	1,325,438	62	104,623	211	1,083,405	1,108	2,513,466
1955	802	1,293,426	66	114,029	215	1,060,758	1,083	2,468,213
1956	798	1,287,833	79	131,187	257	1,306,839	1,134	2,725,859
1957	803	1,280,976	77	130,423	251	1,256,709	1,131	2,668,108

\* 9 Months. Exclusive of H.M. Warships and Transports, Survey and Exploration Vessels.





A VIEW OF THE PORT DURING THE VISIT OF THE ROYAL YACHT *BRITANNIA*, DECEMBER, 1956



# Cargo

## COMPARATIVE TONNAGE STATISTICS OF CARGO PASSING OVER THE WHARVES AT LYTTTELTON

For the 35 Years and Nine Months ended 30th September, 1957

YEAR	INWARDS		OUTWARDS		TRANS- SHIPMENTS	TOTAL
	Coastal	Overseas	Coastal	Overseas		
1877 to	not available					
1921						
1922	203,125	218,207	149,687	85,192	2,210	658,421
1923	211,678	244,084	176,188	57,798	2,008	691,756
1924	154,692	342,007	150,371	56,160	1,948	705,178
1925	152,131	343,555	163,308	64,965	3,016	726,975
1926						
(9 months)	121,869	236,002	121,389	66,769	2,082	548,111
1927	157,919	282,188	178,326	75,152	2,647	696,232
1928	142,760	258,374	217,569	71,920	645	691,268
1929	167,234	276,806	231,594	68,881	500	745,015
1930	165,531	264,644	224,796	70,628	570	726,169
1931	121,135	194,267	190,060	64,683	1,599	571,744
1932	101,223	157,579	155,762	75,109	1,451	491,124
1933	94,382	174,963	147,370	105,280	1,489	523,484
1934	115,220	179,510	177,603	75,805	1,941	550,079
1935	118,895	223,375	188,540	71,425	2,302	604,537
1936	126,215	260,354	205,010	75,632	2,721	669,932
1937	140,255	304,826	220,919	94,780	2,652	763,432
1938	158,976	314,860	175,551	74,604	3,599	727,590
1939	158,478	310,508	191,475	85,581	3,265	749,307
1940	169,457	228,622	191,932	77,748	2,744	670,503
1941	180,947	213,104	212,019	63,358	1,425	670,853
1942	207,468	163,311	211,443	113,126	3,899	699,247
1943	194,611	132,114	226,715	149,063	327	702,830
1944	181,655	194,798	232,526	115,569	2,404	726,952
1945	172,693	153,168	237,656	93,897	861	658,275
1946	183,508	225,269	225,449	99,583	342	734,151
1947	192,483	268,401	244,727	96,204	834	802,649
1948	187,994	364,741	220,748	130,570	1,005	905,058
1949	200,297	344,065	242,139	107,302	1,633	895,436
1950	191,017	407,198	229,735	101,092	139	929,181
1951	173,139	398,259	230,981	97,562	1,267	901,208
1952	203,666	616,045	262,762	105,662	3,292	1,191,427
1953	200,724	469,315	285,575	91,971	1,532	1,049,117
1954	222,127	487,168	288,078	82,270	2,991	1,082,634
1955	260,212	633,320	306,688	89,419	2,903	1,292,542
1956	271,728	681,051	296,751	111,960	1,171	1,362,661
1957	277,894	712,615	323,207	123,024	381	1,437,121



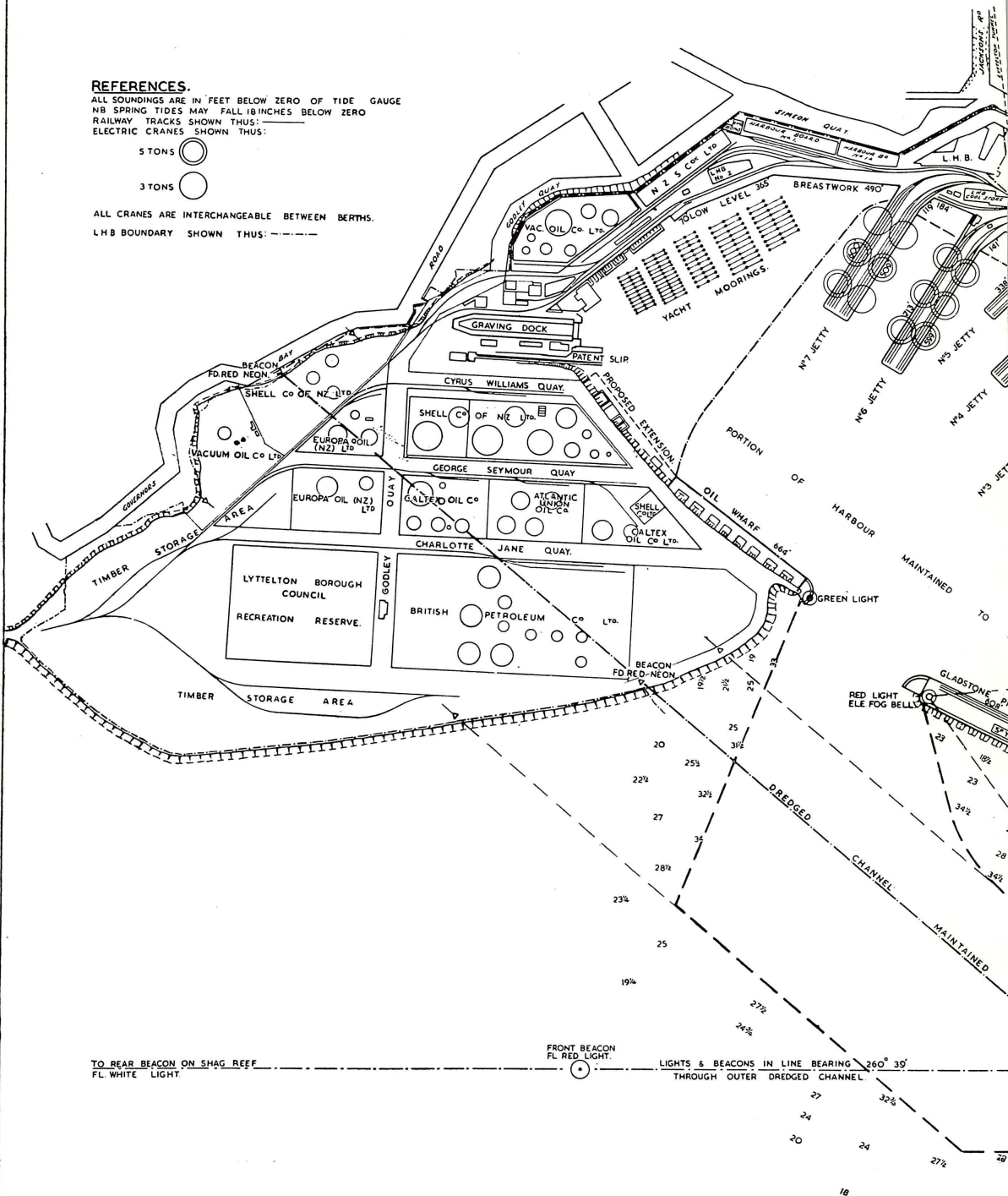
# REFERENCES.

ALL SOUNDINGS ARE IN FEET BELOW ZERO OF TIDE GAUGE  
 NB SPRING TIDES MAY FALL 18 INCHES BELOW ZERO  
 RAILWAY TRACKS SHOWN THUS: ————  
 ELECTRIC CRANES SHOWN THUS: ————



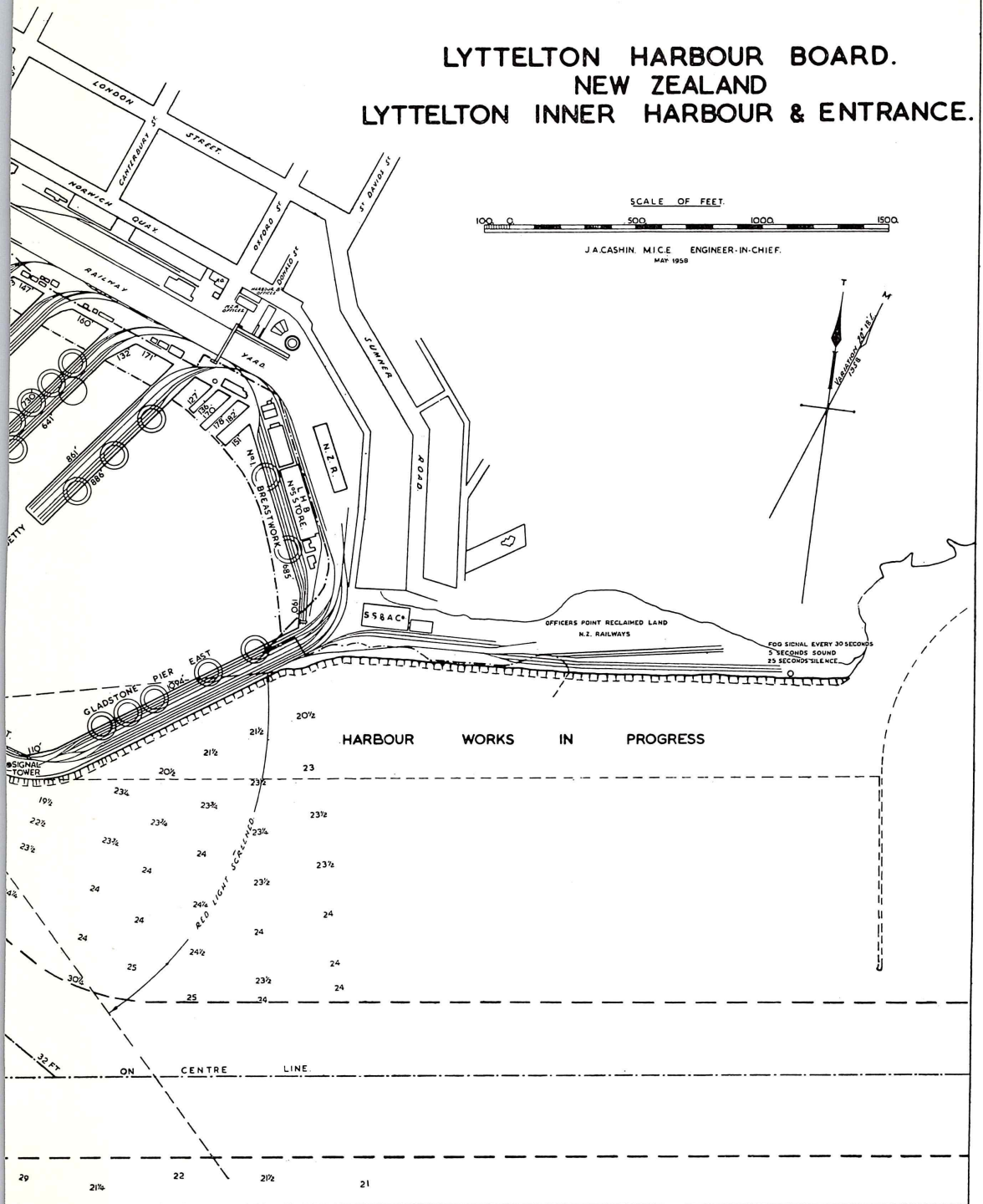
ALL CRANES ARE INTERCHANGEABLE BETWEEN BERTHS.

L.H.B. BOUNDARY SHOWN THUS: - - - - -



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# LYTTTELTON HARBOUR BOARD. NEW ZEALAND LYTTTELTON INNER HARBOUR & ENTRANCE.



PORT OF LYTTTELTON





AN OUTLINE MAP SHOWING PORT LYTTELTON





